



Outreach Event

10.00-10.15: Welcome and introduction to the day's events.

10.15-10.45: Presentation introducing the topic of synthetic biology and how microscopy is an important tool within this field.

10.45-11.15: Break: Snacks and Juice will be provided in the Tom Ap Rees room for the students and teachers. iGEM team members will bring the teachers tea/coffee from the tea room if they would like it.

11.15-12.45: Students will be split into two groups with one attending a Microscopy Workshop while the other attends an Arduino Workshop.

Microscopy Workshop

Will take place in the Plant Science Teaching Lab. There will be 5 activities which the students will rotate around. The activities will be:

- Making GFP *Marchantia* slides.
- Imaging parts of *Drosophila* flies from the Zoology Department.
- Imaging different rocks using a petrographic microscope from the Geology Department.
- Making their own slides of their cheek cells
- Imaging their samples and other pre-made samples under the lab's fluorescence microscope

After this the students will have a chance to image their best samples under the iGEM 3D Printed microscope.

Teachers are welcome to join in with the activities, just overlook or find out a bit more about the project if they wish.

Arduino Workshop

This will take place across the road from the Plant Sciences Department in the Phoenix Training Room, New Museums Site. The students and teachers will be accompanied to and from the room by some of the iGEM team. This workshop will be carried out in 3 parts:

- A short presentation covering how to set up, use and code the arduinos.

- A set of 3 interactive exercises increasing in difficulty: the students will have the chance to wire up and write code to run on the arduinos themselves.
- A chance to play around with some of the sensors that can be run directly from the arduino and have a think about how these could be incorporated together to create open source devices. (It is expected that some students will finish the exercises faster than others: they can then move onto this part whenever they are finished).

The teachers are again invited to get as involved in the workshop as they wish. Teachers and students will be given a booklet, to take away with them, containing all the information taught at the workshop and information on where to find extra information and activities about arduinos.

12.45-13.30: Lunch: This will take place in the Nihon Room in Pembroke College (just across the road from the Plant Sciences Department). Members of the iGEM team will accompany teachers and students there and back.

13.30-15.00: Microscopy/Arduino Workshops: students will attend the workshop that they did not do in the morning.

15.00-15.30: Opportunity for students to ask iGEM team any questions they have about STEM subjects and applying to uni. We will also have a short feedback session.